

IN THE DRAWINGS:

The attached drawing includes changes to the FIGURE. The REPLACEMENT SHEET containing the FIGURE replaces the replacement sheet which added the term "FIGURE."

In the Office Action on page 2, the Examiner objected to the FIGURE and required correction of the FIGURE filed on September 2, 2005 to show the "HONEYCOMB CARRIER" and "NON-WOVEN HEATING MAT." Thus, a REPLACEMENT SHEET incorporating the required corrections is submitted herewith. Approval of these changes to the FIGURE is respectfully requested.

REMARKS**INTRODUCTION:**

In accordance with the foregoing, claims 2, 6, 12 and 16 have been canceled without prejudice or disclaimer, and claims 1, 5, 9, 13 and 15 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1, 3-5, 7-11, and 13-15 are pending and under consideration. Reconsideration is respectfully requested.

OBJECTIONS TO THE DRAWINGS:

In the Office Action, at page 2, the drawings were objected to. Corrections to the FIGURE have been requested, and a replacement FIGURE has been submitted herewith. In particular, an exploded view of element 2 has been shown with a label "OXIDATIVE CATALYST FILTER/HONEYCOMB CARRIER/NON-WOVEN HEATING MAT." No new matter has been added. Therefore, the outstanding drawing objections should be resolved.

Reconsideration and withdrawal of the outstanding objections to the FIGURE are respectfully requested.

REJECTION UNDER 35 U.S.C. §102:

A. In the Office Action, at pages 2-4, claims 1, 3-5, and 7-11 were rejected under 35 U.S.C. §102(b) as being anticipated by Kurotori et al. (USPN 4,415,533; hereafter, Kurotori). This rejection is traversed and reconsideration is requested.

Independent claim 1 has been amended to include the features of claim 2; claim 2 has been cancelled without prejudice or disclaimer. Claim 5 has been amended to include the features of claim 6; claim 6 has been cancelled without prejudice or disclaimer. Claim 9 has been amended to include the features of claim 12; claim 12 has been cancelled without prejudice or disclaimer. Claim 13 has been amended to update antecedent basis.

This amendment is also supported by page 5, paragraph [0025] of the specification.

It is respectfully submitted that amended independent claims 1, 5 and 9 thus include a heating coil that is installed inside the exhaust line and that is coated with platinum on an outer surface, which is not recited, taught or suggested by Kurotori. Hence, Kurotori does not teach all the structural limitations of amended independent claims 1, 5 and 9.

Hence, amended independent claims 1, 5 and 9 are submitted not to be anticipated under 35 U.S.C. §102(b) by Kurotori et al. (USPN 4,415,533). Since claims 3-4, 7-8 and 10-11

depend from amended independent claims 1, 5 and 9, respectively, claims 3-4, 7-8 and 10-11 are not anticipated under 35 U.S.C. §102(b) by Kurotori et al. (USPN 4,415,533) for at least the reasons that amended independent claims 1, 5 and 9 are not anticipated under 35 U.S.C. §102(b) by Kurotori et al. (USPN 4,415,533).

B. In the Office Action, at pages 4-6, claims 1, 2, 4, and 8-12 were rejected under 35 U.S.C. §102(b) as being anticipated by Kim (USPN 6,041,201; hereafter, Kim). This rejection is traversed and reconsideration is requested.

Independent claim 1 has been amended to include the features of claim 2; claim 2 has been cancelled without prejudice or disclaimer. Claim 5 has been amended to include the features of claim 6; claim 6 has been cancelled without prejudice or disclaimer. Claim 9 has been amended to include the features of claim 12; claim 12 has been cancelled without prejudice or disclaimer.

It is respectfully submitted that amended independent claims 1, 5 and 9 thus include a heating coil that is installed inside the exhaust line and that is coated with platinum on an outer surface, which is not recited, taught or suggested by Kim. That is, it is respectfully submitted that although the Examiner submits: "...the heating coil (300) is installed inside the exhaust line and covered by filter (200), which is formed of platinum," this is not quite correct. In col. 2, lines 42-50, Kim states:

The platinum catalyst filter 200 is a filter coated with platinum as a catalyst. When the filter 200 is heated, the filtered solvent is easily decomposed by the catalyst reaction of platinum. (emphasis added)

A hollow cylinder 201 is formed in the middle of the filter 200 and a heater 300 for heating the filter 200 is installed in the hollow cylinder 201. Reference numeral 202 indicates a cover closing both ends of the hollow cylinder 201. (emphasis added)

Hence, Kim recites utilizing a filter coated with platinum, and does not recite, teach or suggest coating the heating coil with platinum, as is recited in amended independent claims 1, 5 and 9 of the present invention. Thus, Kim does not teach all the structural limitations of amended independent claims 1, 5 and 9.

Hence, amended independent claims 1, 5 and 9 are submitted not to be anticipated under 35 U.S.C. §102(b) by Kim (USPN 6,041,201). Since claims 3-4, 7-8 and 10-11 depend from amended independent claims 1, 5 and 9, respectively, claims 3-4, 7-8 and 10-11 are not anticipated under 35 U.S.C. §102(b) by Kim (USPN 6,041,201) for at least the reasons that amended independent claims 1, 5 and 9 are not anticipated under 35 U.S.C. §102(b) by Kim (USPN 6,041,201).

C. In the Office Action, at page 6, claims 1, 2, 4-6, 8-12, 15 and 16 were rejected under 35 U.S.C. §102(b) as being anticipated by Yoda et al. (USPN 5,198,195; hereafter, Yoda). This rejection is traversed and reconsideration is requested.

Independent claims 1, 5, 9, and 15 have been amended. Claims 2, 6, 12 and 16 have been cancelled without prejudice or disclaimer.

It appears that the Examiner has inadvertently referred to a catalyst as a "oxidative catalyst filter." The Examiner submits, page 6 of the Office Action:

Yoda et al. disclose an exhaust system of a liquid electrophotography printer,and an oxidative catalyst filter, for example 802 in figure 21 or 308 in figure 13, to filter col. 12, lines 38-43... (emphasis added)

It is respectfully submitted that none of these three examples implements a filter, as may be seen from the recitations below:

Yoda, col. 19, lines 19-27:

A catalyst 802 is disposed above the pipe 798. The catalyst 802 is provided above the pipe 798 so as to close the upper portion of the pipe 798, as well as being fixed in the central portion of a partition 804 which serves to partition off the pipe 798 from the exhaust tank 800 in such a manner that the lower surface of the catalyst 802 is exposed to the inside of the pipe 798 and the upper surface thereof is exposed to the inside of the exhaust tank 800. (emphasis added)

Yoda, col. 10, line 18 through col. 11, line 2:

A catalyst 308 (for example, a platinum group catalyst or a nickel or chromium catalyst) is fixed to the upper surface of the combustion tank 198 in such a manner that its lower surface is exposed to the inside of the combustion tank 198 and its upper surface is exposed to the outside thereof. The solvent contained in the excess developer which was vaporized in the combustion tank 198 is supplied to the catalyst 308. A catalyst igniting heater 310 (for example, composed of a platinum filament) is disposed above the catalyst 308 and is connected to a power source 314 through a relay contact point 312. The relay contact point 312 is connected to the output port 39 of the control circuit 35. (emphasis added)

Yoda, col. 12, lines 38-43:

After the rinsing solution 83 and the excess developer have been discharged to the waste tank 188, they are sent to the combustion tank 198, vaporized therein and then passed through the catalyst 308 where they are changed into carbon dioxide and water vapor which are then discharged to the air.

Hence, it is respectfully submitted that Yoda does not recite, teach or suggest the oxidative catalyst filter to filter and deodorize the impurities, as is recited in amended independent claims 1, 5, 9 and 15 of the present invention. Thus, Yoda does not teach all the structural limitations of amended independent claims 1, 5, 9 and 15.

Hence, amended independent claims 1, 5, 9 and 15 are submitted not to be anticipated under 35 U.S.C. §102(b) by Yoda (USPN 5,198,195). Since claims 4, 8, 10-11, and 13-14 depend from amended independent claims 1, 5 and 9, respectively, claims 4, 8, 10-11, and 13-14 are not anticipated under 35 U.S.C. §102(b) by Yoda (USPN 5,198,195) for at least the reasons that amended independent claims 1, 5, 9 and 16 are not anticipated under 35 U.S.C. §102(b) by Yoda (USPN 5,198,195).

REJECTION UNDER 35 U.S.C. §103:

A. In the Office Action, at page 7, claims 3, 7, 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kim (USPN 6,041,201; hereafter, Kim) in view of Yamamoto et al. (USPN 6,535,703; hereafter, Yamamoto). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As admitted by the Examiner, Kim does not disclose that the filter is a metallic honeycomb carrier or a non-woven heating mat. As noted above, Kim also does not disclose coating the heating coil with platinum, as is recited in amended independent claims 1, 5 and 9 of the present invention.

Yamamoto recites, col. 8, lines 19-59:

In the first embodiment shown in FIG. 4, the cleaning cartridge 10 comprises: a tubular cartridge outer sleeve 61 having, on one end thereof, an annular flange extending inward in the radial direction; a treatment agent 6 accommodated in the cartridge outer sleeve 61; mesh members 63 and 64 in the form of disk; and a cartridge lid 65 having a circular opening. The mesh member 63 is slightly larger than the inner diameter of the cartridge outer sleeve 61, and the mesh member 64 is slightly larger than the inner diameter of the flange. The cleaning cartridge 10 shown in FIG. 4 is assembled as follows. First, the mesh member 64 is inserted into the cartridge outer sleeve 61 and it is stopped by the flange. Then the treatment agent 62 is supplied into the cartridge outer sleeve, and the open end of the cartridge outer sleeve 61 is covered with the mesh member 63 before the cartridge lid 65 is fitted on the cartridge outer sleeve. The treatment agent 62 is not particularly restricted, providing it is a material manifesting adsorbing or absorbing ability for the carrier solvent. As examples of the material having adsorbing ability, adsorbents such as activated carbon, metal oxide and the like are specifically listed, and it is preferred to use a porous material having a large surface area. These adsorbent materials are possibly applied in the form of: a broken powder thereof; a filter having a porous structure such as a honeycomb structure and the like, and produced by molding the powdered particles thereof by pressing, sintering or fixing with use of a binder and the like; or a filter produced by allowing the adsorbent to be supported and fixed on a ceramic material, and the like. As those having an absorbing ability, absorbing agents for an acid, alkali aqueous solution and the like are listed, and they can be used in the form of gel beads, and the like. Activated carbon has an extremely high adsorbing ability, and is preferable also from the standpoint of recycle since regeneration of the recovered adsorbent and recovering of the carrier solvent can be conducted easily by heating. Therefore, activated carbon is particularly preferable to be used as the treatment agent.

In FIG. 4, the cleaning cartridge 10 is so installed as to give a flow of the exhaust from the cartridge lid 65 to the flange in the direction depicted by an arrow g. However, the reverse installation may also be applicable. (emphasis added)

Hence, Yamamoto teaches away from a metallic honeycomb structure, which is recited in independent claims 1, 5, and 9 of the present invention, because Yamamoto recites the use of an absorbing element, preferably, activated carbon, which is a non-metal.

Thus, even if combined, Kim and Yamamoto do not teach or suggest amended claims 1, 5, and/or 9 of the present invention. Hence, amended claims 1, 5 and 9 are submitted to be patentable under 35 U.S.C. §103(a) over Kim (USPN 6,041,201) in view of Yamamoto et al. (USPN 6,535,703), alone or in combination. Since claims 3, 7, 13 and 14 depend from amended claims 1, 5, and 9, respectively, claims 3, 7, 13 and 14 are submitted to be patentable under 35 U.S.C. §103(a) over Kim (USPN 6,041,201) in view of Yamamoto et al. (USPN 6,535,703) for at least the reasons amended claims 1, 5 and 9 are patentable under 35 U.S.C. §103(a) over Kim (USPN 6,041,201) in view of Yamamoto et al. (USPN 6,535,703).

B. In the Office Action, at pages 7-8, claims 3, 7, 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yoda et al. (USPN 5,198,195; hereafter, Yoda) in view of Yamamoto et al. (USPN 6,535,703; hereafter, Yamamoto). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

The Examiner states: "Yoda does not disclose that the filter is a metallic honeycomb carrier or a non-woven heating mat." However, as noted above, Yoda does not recite, teach or suggest the oxidative catalyst filter to filter and deodorize the impurities, as is recited in amended claims 1, 5 and 9 of the present invention.

In the present invention, a heating coil heats the air to be discharged through the exhaust line and igniting impurities contained in the air, wherein the heating coil is installed inside the exhaust line and coated with platinum on an outer surface; and an oxidative catalyst filter filters and deodorize the impurities. That is, impurities are easily filtered and deodorized by combination of a direct combustion method using the heating coil coated with platinum on an outer surface and a catalytic oxidation method using the oxidative catalyst filter.

As noted above, Yamamoto teaches away from a metallic honeycomb structure, which is recited in independent claims 1, 5, and 9 of the present invention, because Yamamoto recites the use of an absorbing element, preferably, activated carbon, which is a non-metal.

Thus, even if combined, Yoda and Yamamoto do not recite, teach, or suggest independent claims 1, 5 and/or 9 of the present invention. Hence, amended independent claims

1, 5 and 9 are submitted to be patentable under 35 U.S.C. §103(a) over Yoda et al. (USPN 5,198,195) in view of Yamamoto et al. (USPN 6,535,703), alone or in combination. Since claims 3, 7, 13 and 14 depend from amended independent claims 1, 5 and 9, respectively, claims 3, 7, 13 and 14 are patentable under 35 U.S.C. §103(a) over Yoda et al. (USPN 5,198,195) in view of Yamamoto et al. (USPN 6,535,703) for at least the reasons that claims 1, 5 and 9 are patentable under 35 U.S.C. §103(a) over Yoda et al. (USPN 5,198,195) in view of Yamamoto et al. (USPN 6,535,703).

COMMENTS ON RESPONSE TO ARGUMENTS:

The FIGURE has been amended to explode element 2 and show a label reciting "OXIDATIVE CATALYST FILTER/HONEYCOMB CARRIER/NON-WOVEN HEATING MAT." No new matter has been added. Thus, the REPLACEMENT SHEET incorporating the required corrections is submitted herewith. Approval of these changes to the FIGURE is submitted to show every feature of the invention specified in the claims. Thus, the outstanding drawing objections should be resolved.

The independent claims have been amended to include the feature that the heating coil is installed inside the exhaust line and is coated with platinum on an outer surface, which is not recited, taught, or suggested by Kurotori (see further explanation above). Hence, the present claimed invention is submitted to be patentable over Kurotori.

It is respectfully submitted that the systems (set forth in independent claims 1, 9 and 15) of the present invention implement the use of the combination of a direct combustion method using the heating coil (now amended to recite: coated with platinum on an outer surface) and a catalytic oxidation method using the oxidative catalyst filter. Thus, it is respectfully submitted that applicant did present arguments with respect to the apparatus claims. Hence, it is respectfully submitted that Applicant's arguments are persuasive with respect to claim 1, and this portion of the rejection should also be withdrawn.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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